

Ecological Site Description ID:		F231XY192AK	
Ecological Dynamics of the Site:			
This boreal ecological site is associated with high-gradient drainages that occur on hills, mountains, and escarpments (i.e. average slope 40% ranging from 17-79%). This ecological site occurred on various aspects. Communities based on disturbances from a flood regime were not observed. Differences in sampled plant communities within this ecological site were presumed to occur due to fire history. For community phase 1.1, soils were classified as haplorthels and were composed of organic matter over gravelly alluvium.			
State and Transition Diagram:			
<div><div>1.0 Reference State</div><div>Boreal woodland loamy frozen drainages steep</div><div>F231XY192AK</div><div><div><div>1.1 (HCPC) Mixed spruce-alder-bluejoint-feathermoss woodland</div><div>1.2 (2FL) Paper birch-mixed spruce-alder-prickly rose-bluejoint-mixed forb forest</div><div>1.3 (2FE) Alder-mixed tree regeneration-raspberry-red currant-bluejoint-mixed forb scrubland</div></div><div><div>1.1 a</div><div>1.2 b</div><div>1.2 a</div><div>1.3 a</div></div></div></div>			
State ID Number:	1	State Name:	Reference
State Narrative:	<p>Phases within the reference state were grouped on the structure and dominance of deciduous and coniferous trees which was believed to directly relate to time since last fire event and severity of burn.</p> <p>Due to the steepness and presence of dense paper birch communities, a high-severity fire regime was considered to be the typical fire disturbance for this ecological site. In a high-severity fire, large proportions of the organic mat are consumed and mineral soils will typically be exposed. Permafrost often drops out of the soil profile and the sites become drier. While many pre-fire species likely regenerate after fire, conditions are suitable for the establishment and growth of species with wind-blown seed (e.g. paper birch, fireweed, willow).</p> <p>Tall trees are defined as trees growing >40’ in height, medium trees are defined as growing 15-40’ in height, while stunted and regenerative trees are defined as growing less than 15’ in height. Tall shrubs are defined to grow greater than 10’ in height, medium shrubs are defined to grow 3-10’ in height, low shrubs are defined to grow 8” – 3’ in height, and dwarf shrubs are defined to grow less than</p>		

	8" in height.		
Photo 1.1			

Community Phase Number:	1.1	Community Phase Name:	Mixed spruce-alder-bluejoint-feathermoss woodland
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Community Phase Narrative:			
<p><i>Picea mariana</i> was the most abundant tree species primarily occurring in the medium and regenerative tree stratum. <i>Betula neoalaskana</i> and <i>Picea glauca</i> were observed but at lesser densities (total mature tree cover ~10%) Shrub cover primarily occurred in the tall and low stratum (total shrub cover ~100%) and the most commonly observed shrub species were <i>Alnus viridis</i> ssp. <i>fruticosa</i>, <i>Rosa acicularis</i>, <i>Rubus arcticus</i>, and <i>Vaccinium vitis-idaea</i>. Graminoids (~20% cover) and forbs (~40% cover) were abundant the most commonly observed species being <i>Calamagrostis canadensis</i>, various <i>Equisetum</i> sp., and <i>Mertensia paniculata</i>. Moss (~50% cover) and leaf litter (~50% cover) were the predominant forms of ground cover and the moss mat was primarily composed of <i>Hylocomium splendens</i> mixed with <i>Sphagnum</i> sp. This phase had 2 observations.</p>			

Community Pathways	
Pathway Number	Pathway Name & Description
1.1 a	Fire. For this ecological site, this phase had the longest fire return interval.

Photo 1.2



Community Phase Number:

1.2

Community Phase Name:

Paper birch-mixed spruce-alder-prickly rose-bluejoint-mixed forb forest

Community Phase Narrative:

Betula neoalaskana was the most abundant tree species primarily occurring in the tall and medium tree strata. *Picea mariana* and *Picea glauca* were observed but at lesser densities (total mature tree cover ~25%). Shrub cover primarily occurred in the tall shrub stratum (total shrub cover ~75%) and the most commonly observed shrub species were *Alnus viridis* ssp. *fruticosa* and *Rosa acicularis*. While graminoids were limited (~10% cover) forbs were abundant and highly diverse (~50% cover). Commonly observed species include *Calamagrostis canadensis*, various *Equisetum* sp., and *Mertensia paniculata*. Leaf litter (~60% cover) and moss (~25% cover) were the predominant forms of ground cover and the moss mat was primarily composed of *Hylocomium splendens* mixed with *Sphagnum* sp. This phase had 5 observations.

Community Pathways

Pathway Number

Pathway Name & Description

1.2 a

Fire.

1.2 b

Normal time and growth without fire. Paper birch is replaced by maturing spruce woodland. The fire return interval was presumed to be shorter than phase 1.1 but longer than phase 1.3.

Photo 1.3



Community Phase
Number:

1.3

Community
Phase Name:

Alder-mixed tree regeneration-raspberry-red
currant-bluejoint-mixed forb scrubland

Community Phase Narrative:

Betula neoalaskana, *Picea mariana*, and *Picea glauca* occurred at low densities and primarily in the regenerative tree stratum (~5% total tree cover). Shrub cover primarily occurred in the tall, medium, and low shrub strata (total shrub cover ~90%) and the most commonly observed shrub species were *Alnus viridis* ssp. *fruticosa*, *Salix bebbiana*, *Rubus idaeus*, *Rosa acicularis*, and *Ribes triste*. While graminoids were limited (~15% cover) forbs were abundant and highly diverse (~40% cover). Commonly observed species include *Calamagrostis canadensis*, various *Equisetum* sp., *Mertensia paniculata*, *Polygonum alpinum*, *Cystopteris fragilis*, and *Boschniakia rossica*. Leaf litter (~70% cover) and moss (~25% cover) were the predominant forms of ground cover and the moss mat was primarily composed of *Hylocomium splendens* mixed with *Sphagnum* sp. This phase had four observation.

Community Pathways

Pathway Number

Pathway Name & Description

1.3 a

Normal time and growth without fire. Paper birch and spruce mature into woodland.